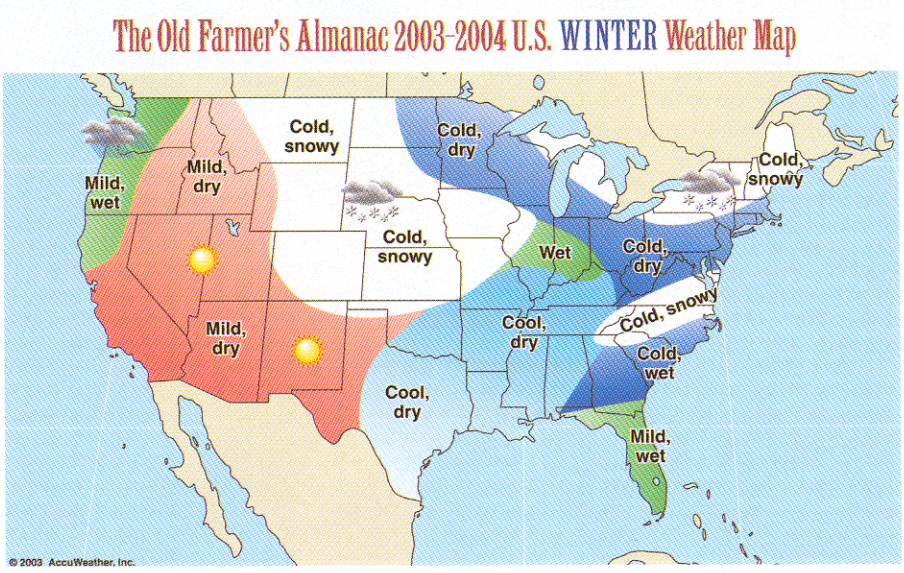
The Back of the Front

Keeping the Almanac Honest

by Bryan Yeaton



Nick Bond is a researcher at NOAA's Pacific Marine Environmental Laboratory in Seattle, Washington. For years he has been reading and questioning the weather predictions in the venerated *Old Farmer's Almanac*. Since the almanac claims an 80 percent accuracy rate in its year-long forecasts, Bond decided to take a closer look at the almanac's actual predictions. Bond examined 13 years of data from the Pacific Northwest and compared the data to the almanac's predictions for the same time period.

Bond's conclusion: the predictions are a load of hooey. For example, he found that the almanac's temperature forecasts had about the same odds as flipping a coin. And its predictions for precipitation were even worse.

John Pierce, group publisher for the *Old Farmer's Almanac*, defended the almanac's accuracy. "We claim that we're 80 percent accurate," he said, "which is a tradition among almanac editors, but in all honesty we feel we're right about 8 times in 10 on a seasonal basis. If we say, for example, the winter of 2003–2004 in New Hampshire is going to be below average temperature and above average snowfall, we feel we'll be right at least 80 percent of the time."

How does Pierce respond to meteorologists and other statistical researchers who say the almanac's forecasts are little better than chance—and sometimes worse? He said there are different ways to interpret the data. "We cover the entire United States and 16 weather regions. We take anywhere from five to eight different data points in each region and calculate an average weather forecast for the entire region based on those data points. So, it's easy for someone to pick a specific locale and say that we're totally inaccurate."

"The way we measure our accuracies, scientifically, is on the basis of our precipitation and temperature forecasts. For every month, for every region, we say it's going to be above or below normal, and we give a specific degree. For example, for the year before last, the accuracy ranged anywhere from a low of 20 in one region to a high of 92 in another region for either temperature or precipitation. When you blend it all together, we were 68 percent accurate for the winter of 2001–2002." Which, he added, was a winter that took many forecasters by surprise.

According to Pierce, the actual forecast formula is locked in a little metal box in Dublin, New Hampshire, home of the almanac. The basis for the formula, however, is no big secret. "We're pretty open about it," he said. "Solar science is the driving factor in our forecast. We have a solar scientist who studies the sun and gives us a forecast of what will happen in the next 12 to 18 months, theoretically. And then we translate that into a meteorological forecast using first, climatology ... and then meteorology .... What we do feel is that, in terms of the general trends and the seasonal forecasts, we're at least pointing in the right direction, and [at] a much higher percentage than we get credit for from the scientific community."

Based on the formula, here's what the *Old Farmer's Almanac* predicted for winter, according to Pierce: "We see a trend towards a colder winter for the next few years because we're in the declining phase of the solar cycle, which peaked in 2001. Here in the Northeast, it's going to be not much different from last winter."

"But overall we expect the drought to continue in the west and above average temperatures west of the Rockies. The desert southwest will be a little bit cool at the start of the winter, but then [it will] warm up. And we expect Florida and southeastern United States to have an average winter."

Bond hasn't published the results of his statistical work. He says the study was done mostly for fun, but with an eye on keeping the almanac honest in its claims. Bond admitted he will probably buy the new edition, as the tide chart and sunrise/sunset information are quite useful, and the rustic, nostalgic presentation is appealing. And, he added, "the forecasts do seem to be getting better."

BRYAN YEATON hosts the Weather Notebook, *a nationally syndicated radio show about weather, produced by the Mount Washington Observatory in New Hampshire. He also serves as educational outreach coordinator for the observatory and travels throughout the country teaching children and adults about the atmosphere.*